

IMPLEMENTATION PRIORITIES

TABLE OF CONTENTS

11.0 IMPLEMENTATION PRIORITIES	11-2
11.1 New Policy Directions	11-2
11.2 Monitoring and Adaptive Management	11-7
11.3 Further Investigation	11-8
11.4 Regeneration.....	11-9
11.4.1 Subwatershed Regeneration Plans.....	11-9
11.4.2 Priority Areas for Integrated Regeneration Projects.....	11-21
11.5 Summary of Implementation Priorities by Watershed Partner.....	11-39

LIST OF FIGURES

Figure 11-1: Subwatershed Regeneration Plans – Key Map.....	11-10
Figure 11-2: Etobicoke Creek Headwaters Subwatershed Regeneration Plan	11-11
Figure 11-3: Etobicoke Creek West Branch Subwatershed Regeneration Plan.....	11-12
Figure 11-4: Spring Creek Subwatershed Regeneration Plan	11-13
Figure 11-5: Tributary 3 Subwatershed Regeneration Plan	11-14
Figure 11-6: Etobicoke Creek Main Branch Subwatershed Regeneration Plan	11-15
Figure 11-7: Little Etobicoke Creek Subwatershed Regeneration Plan.....	11-16
Figure 11-8: Tributary 4 Subwatershed Regeneration Plan	11-17
Figure 11-9: Lower Etobicoke Creek Subwatershed Regeneration Plan.....	11-18
Figure 11-10: Lake Ontario Drainage Subwatershed Regeneration Plan.....	11-19
Figure 11-11: Mimico Creek Watershed Regeneration Plan	11-20
Figure 11-12: Screening Map #1 - Regeneration Areas/Actions Addressing Criteria of Urgency and Scale/Effectiveness.....	11-24
Figure 11-13: Screening Map #2A - Ongoing Regeneration Partnerships and Initiatives	11-25
Figure 11-14: Screening Map #2B – Planned Municipal Capital Works.....	11-26
Figure 11-15: Screening Map #2C - Major Development or Re-development Planning Areas	11-27
Figure 11-16: Priority Areas for Integrated Regeneration Projects and Habitat Enhancement Projects	11-31

LIST OF TABLES

Table 11-1: New Policy Recommendations for the Etobicoke and Mimico Creeks Watersheds	11-3
Table 11-2: Priority Areas for Integrated Regeneration Projects	11-32
Table 11-3: Priority Areas for Habitat Regeneration Projects	11-37

11.0 IMPLEMENTATION PRIORITIES

Restoring the natural function and resilience of the watersheds and building their capacity to adapt to change are common themes of this report's recommendations. Drawing from the specific recommendations contained within each section of the report, Section 10 identifies five strategic management directions that emerge from this work:

1. Expand and enhance natural cover and connectivity.
2. Restore a more natural water balance.
3. Foster stewardship and sustainable behaviour.
4. Manage the rebounding groundwater levels.
5. Advance the science and practice of watershed management.

Many policies and programs of municipalities, TRCA and other agencies and groups are already in place to support implementation of the management recommendations. Many other supportive initiatives are underway. This report provides updated science to support this work and strategic management direction to guide workplan priorities.

This section summarizes implementation priorities in the areas of policy, monitoring, further investigation and regeneration. These priorities are highlighted due to their particular importance at achieving objectives within the scope of this Technical Update, and because new information or tools have been developed to inform work in these areas. This section is meant to be read in conjunction with the management and implementation direction provided in relevant sections of this report, and in the broader watershed regeneration strategy *Greening Our Watersheds* and report card *Turning over a new leaf*.

11.1 New Policy Directions

Land use planning policies are an important mechanism for the implementation of watershed plans. Municipalities in the Etobicoke and Mimico Creeks watersheds already have many supportive policies for which this Technical Update provides new science to guide their application.

Table 11-1 summarizes recommendations for new policy directions that have arisen from this Technical Update. As municipalities update their Official Plan policies, schedules and checklists for the review of development applications (e.g. to determine study requirements and establish conditions of approval), they should identify ways to implement these recommendations if mechanisms do not already exist. **Table 11-1** identifies the overall policy direction and rationale. Additional guidance in the form of model policy concepts and best practices for implementation can be found, for example, in the *Don River Watershed Plan Implementation Guide* (Table 1.1, p. 1-3; TRCA, 2009) or *Watershed Planning – from Recommendations to Municipal Policies* (YPDT/CAMC, 2006). The intent is to provide a broad policy direction that municipal planners can use as the basis for crafting similar policies, tailored to their local circumstances and the formats of their own municipal official plans, while maintaining the substantive intent of the recommended policies.

Table 11-1: New Policy Recommendations for the Etobicoke and Mimico Creeks Watersheds

1. Water Balance, Volume Control & Groundwater Recharge	
Overall Policy Direction	<ul style="list-style-type: none"> • All redevelopment should aim to manage for improved water balance on the development site and net gain in stormwater control across the larger redevelopment area. • All greenfield development and infill should aim to manage for pre-development volumes of infiltration, evapotranspiration and surface runoff. Apply low impact development (LID) stormwater management measures along with conventional end of pipe. • See Figure 3-19 for site specific recharge rates; use erosion threshold values shown in Section 7.0 as a guide for setting stormwater management targets for erosion control; see TRCA's current stormwater management criteria; see also <i>Low Impact Development Planning and Design Guide</i> (TRCA and CVC, 2010).
Policy Rationale	<ul style="list-style-type: none"> • Current stormwater practice is to manage for "peak flows" from a flood risk standpoint, with some degree of erosion and water quality considerations, but this is proving inadequate. Downstream erosion impacts continue to degrade aquatic habitats and alter natural stream-form processes which can put stream-side infrastructure at risk, leading to increased maintenance and repair costs and in some cases, premature failure or replacement. To minimize these risks, stormwater management for new development needs to be undertaken on a "volume control" basis that maintains pre-development runoff rates, flow paths and water quality as much as possible. • Redevelopment offers opportunities to achieve improvements in stormwater control and reduce flood risk, at the scale of the site and the larger redevelopment area. .
2. Stormwater Retrofits in Existing Developments	
Overall Policy Direction	<ul style="list-style-type: none"> • Support retrofits of source/lot level, conveyance and end of pipe stormwater management measures in existing development and redevelopment projects on a comprehensive basis (e.g. such as through a Regional Stormwater Management Strategy).
Policy Rationale	<ul style="list-style-type: none"> • There is a critical need to improve stormwater management throughout the watershed, but especially in developed areas lacking stormwater control. Stormwater flows have led to flooding, erosion and degraded water quality, as well as impacts on municipal infrastructure and aquatic and valley habitats. • The aim is to develop and implement co-ordinated plans to improve stormwater quality and manage erosion on a "volume control" basis in urban areas where controls are either absent or do not meet current standards.
3. Master Environmental Servicing Plans (MESPs) for New Development, Redevelopment and Regeneration Areas	
Overall Policy Direction	<ul style="list-style-type: none"> • Require MESPs to be undertaken in conjunction with planning for major urban development (such as secondary plans or block plans), urban redevelopment (including in the provincially designated Urban Growth Centres, such as downtown Brampton), municipally identified redevelopment areas, major infrastructure projects and major regeneration projects. • The term redevelopment MESP is used here to refer to comprehensive servicing and environmental

	<p>evaluations and strategic plans undertaken to guide redevelopment or regeneration projects. Individual municipalities may adopt their own names for these types of plans as a whole or on a case-by-case basis related to the study trigger.</p> <ul style="list-style-type: none"> • MESP s should be undertaken on a subwatershed or tributary basis and studies should consider cumulative impacts downstream and upstream of the development. • MESP studies should develop a water management strategy (e.g. investigation of the potential for Regional storm control or other new ways of approaching SWM for the Etobicoke Creek headwater areas). Refer to <i>Don River Watershed Plan Implementation Guide</i> (Table 1.1, p. 1-3; TRCA, 2009) for recommendations about other MESP study components.
<p>Policy Rationale</p>	<ul style="list-style-type: none"> • Sustainable community planning and development requires that the environmental systems frameworks and the functional relationship and interdependencies of the water resources system and the natural heritage system be scientifically understood and commitments made to regenerate or enhance the systems before development or redevelopment proceeds. As the key tool for determining development form in relation to the natural system and environmental servicing infrastructure, MESP s identify features, functions and linkages and define protection and mitigation measures to address watershed policy recommendations such as those listed in the other sections of this table. • Redevelopment is likely to proceed in a piecemeal fashion without the coordination that MESP s could provide. Improvements in stormwater control, flood risk, terrestrial natural heritage, and the greenspace and trail networks often are considered infeasible during site-by-site redevelopment, but may be achieved through careful planning of larger redevelopment areas at a catchment or subwatershed scale.
<p>4. Sustainable Urban Form and Practice</p>	
<p>Overall Policy Direction</p>	<ul style="list-style-type: none"> • Develop strategies and policies to achieve sustainable urban form, including sustainable infrastructure; sustainable transportation; energy, water and other resource conservation; and reduced generation of waste such as GHGs, wastewater, excess heat and material waste, at the neighbourhood, site and building project scales. • Develop strategies and policies to promote eco-business activity that aims to reduce resource use and environmental impacts from business and employment land activity, including: sustainable infrastructure design and operations and business partnerships to support sustainable business practices (e.g. see Proposed [Eco-business] Official Plan Policy Recommendations for Caledon (Eco-Industrial Solutions Ltd., 2010)
<p>Policy Rationale</p>	<ul style="list-style-type: none"> • To create and retrofit compact and healthy communities that maximize the efficient use of resources while minimizing the negative community, personal health and environmental effects of energy-intensive sprawling land use patterns. • Integrated approaches to the design of urban form and retrofits of existing neighbourhoods will facilitate the incorporation of design features that will achieve the broadest range of watershed management objectives in a

	<p>practical, efficient manner.</p> <ul style="list-style-type: none"> Establish broad support for employment land sustainability, eco-business activity and partnerships for implementation (i.e. Eco-Business Zones and Eco-Industrial Parks), especially recognizing the predominance of employment land use in these watersheds.
5. Terrestrial Natural Heritage System	
<p>Overall Policy Direction</p>	<ul style="list-style-type: none"> Identify a target Terrestrial Natural Heritage System based on the system recommended in the Technical Update for inclusion in municipal plans (see Figure 8-5) and adopt policies to protect and regenerate a minimum of 14.1% of the land base as natural cover in the Etobicoke and Mimico Creeks watersheds. Develop strategies and policies that promote a healthy urban forest, including mechanisms to discourage the removal of healthy trees and support naturalization initiatives on both private and publicly owned lands. Support the benefits of green infrastructure to existing and proposed communities, particularly in areas that are intensifying.
<p>Policy Rationale</p>	<ul style="list-style-type: none"> Natural cover provides multiple benefits such as: reducing storm runoff volumes, mitigating climate change, enhancing urban aesthetics and increasing property values, recreational opportunities, increasing biodiversity and improving air quality. Management of the urban forest will be critical to support biodiversity objectives and contribute to natural functions especially given the limited opportunities to expand the terrestrial natural heritage system in these watersheds beyond the targeted 14.1% area and the anticipated effects of climate change. Green infrastructure refers to natural green elements (street trees, woodlands, wetlands, meadows, soil, etc.) and engineered green elements (green roofs, permeable pavement, rainwater harvesting, stormwater management ponds, etc.) that occur in urban and rural settings. Green infrastructure serves multiple beneficial functions, including provision of low impact development stormwater management practices, protection and expansion of greenspace/urban forest cover, protection of natural drainage, etc.
6. Comprehensive Flood Risk Assessment Plans	
<p>Overall Policy Direction</p>	<ul style="list-style-type: none"> Identify flood vulnerable areas within land use planning documents (Official Plans, Secondary Plans, Zoning By-laws) and appropriate planning policies to conduct an integrated and comprehensive risk-based approach to managing natural hazards for redevelopment and intensification within FVAs. These policies should promote flood remediation, urban design that minimizes risk, comprehensive solutions to improve ingress/egress for emergency services and emergency planning as part of redevelopment. Conduct comprehensive flood risk assessment plans where redevelopment or intensification is proposed in a flood vulnerable area (FVA) and/or a Special Policy Area (SPA) (Figure 5-33) that would maintain or decrease the existing level of risk and detail flood remediation, flood proofing, flood warning and emergency response measures.
<p>Policy Rationale</p>	<ul style="list-style-type: none"> To maintain or decrease the existing level of risk where redevelopment or intensification is proposed in flood vulnerable areas and/or Special Policy Areas. Notwithstanding the provincial direction for SPAs in the

	<p>Provincial Policy Statement, there is still pressure for new development in FVAs and this trend is expected to continue with implementation of the Growth Plan.</p> <ul style="list-style-type: none"> • Mitigation of existing flood risk may help to reduce the impacts of more severe or frequent flooding under climate change conditions. • Comprehensive flood risk planning will help offset potential long term economic costs to municipalities of flood mitigation (e.g., financial implications associated with aging municipal infrastructure at risk from severe or frequent flooding events and increased capacity demands).
7. Monitoring and Adaptive Management	
Overall Policy Direction	<ul style="list-style-type: none"> • Support updated and expanded monitoring programs, including ambient monitoring, requirements for pre-development baseline monitoring, cumulative effects monitoring and the monitoring of new technologies to assess their contributions to watershed improvements.
Policy Rationale	<ul style="list-style-type: none"> • Long term, watershed-wide and shorter term site-specific monitoring data are needed to establish baseline conditions, measure impacts from development, assess new technologies and practices and to inform any necessary remedial actions.

The Technical Update (Section 5.0) has also made recommendations for further policy-related initiatives or studies in the following areas:

1. Update the delineation of external watershed boundaries to reflect existing conditions and allow for more accurate modelling and watershed management (All).
2. Undertake timely updates to the watershed hydrology models. Timing should coincide with municipal Official Plan updates (TRCA, underway).
3. Develop new stormwater quantity control criteria, based on findings of the most recent hydrology update (TRCA, planned).
4. Develop strategies and protocols that are adaptive to climate change scenarios, such as changes in the intensity and frequency of extreme events (All,underway).

11.2 Monitoring and Adaptive Management

The Regional Watershed Monitoring Program (RWMP), led by TRCA in partnership with its member municipalities and other monitoring groups, provided a substantial information base for the Etobicoke and Mimico Creeks Watersheds Technical Update. Ongoing monitoring will be essential to identify whether the management strategies are effective and adapt them if necessary. Therefore it is important that the RWMP be continued.

During the Technical Update study, it was found that additional information is needed to fully understand watershed systems. Recommendations for refined monitoring programs include (see relevant report sections for details):

1. Install groundwater level monitoring wells in Thorncliffe and Scarborough aquifers (Section 3.0).
2. Install groundwater quality monitoring wells in Thorncliffe and Scarborough aquifers (Section 3.0).
3. Continue baseflow monitoring within the Etobicoke and Mimico Creeks at annual indicator stations and add monitoring sites to improve the understanding of ground-surface water interactions in the following reaches: Etobicoke Creek West Branch near Steeles Avenue, Spring Creek in the vicinity of the Brampton Esker and Upper East Mimico Creek between Steeles Avenue and Derry Road (Section 4.0).
4. Install additional stream gauge sites at appropriate locations to allow effective calibration of hydrology models (Section 5.0).
5. Repeat detailed field assessments at Regional Watershed Monitoring Program fluvial geomorphologic sites and expand the network of sites (rationale, extent and location of additional sites to be confirmed, pending results of ongoing analysis of alternative stormwater management approaches) (Section 7.0).

11.3 Further Investigation

11.3.1 Further Investigation and Management of Groundwater Levels in Brampton

The Groundwater section of this Technical Update (Section 3.0) identifies an apparent trend toward rising groundwater levels in the vicinity of the Brampton Esker, likely in response to the cessation of groundwater withdrawals associated with aggregate extraction activities. The report calls for further investigation in this area before conclusions can be made about these trends and their implications, and before management recommendations can be formulated. One potential concern involves water levels in the Major Oaks Park pond (see Section 5.0 for details). Further investigation is required in four primary areas:

1. Undertake more monitoring of groundwater levels in this vicinity;
2. Conduct a comprehensive hydraulic assessment of the Major Oaks Park pond;
3. Obtain groundwater pumping rates at golf course associated with Esker Lake North; and
4. Develop action plans that consider long term risk management, aquatic habitat enhancement opportunities and monitoring needs, as required.

11.3.2 Further Investigation Needs in Other Areas

While the priority for follow up investigation is associated with the Brampton Esker groundwater levels, the Technical Update has identified other areas for further investigation or study as opportunities arise (see relevant report sections for details):

1. Investigate ways to identify stream reaches that may be sensitive to baseflow fluctuations due to climate change (Section 4.0).
2. Complete the flood protection and remedial capital works strategy and undertake projects that will mitigate flooding (Section 5.0).
3. Prioritize remedial erosion control works, based on a watershed-wide assessment which has identified at risk infrastructure or property (Section 7.0).
4. Investigate sources of high *E. coli* levels in both Creeks (Section 6.0).
5. Municipal partners should monitor the effectiveness of salt management plans (Section 6.0).
6. Investigate the potential significance of chloride contributions from groundwater sources associated with marine shale formations in the lower watersheds (Section 6.0).
7. Improve knowledge of wet weather water quality (Section 6.0).

11.4 Regeneration

Regeneration activities are central to many of this report's recommendations and critical to the future health of these watersheds. For the purposes of this report, regeneration comprises "in the ground" works, on either publicly owned or privately owned land, which address the following objectives:

- Water quality and quantity management (e.g., stormwater retrofit projects)
- Aquatic and terrestrial habitat enhancement (e.g., tree planting, wetland creation, fish barrier mitigation); and
- Flood and erosion risk remediation (e.g., culvert enlargements, infrastructure protection).

Individual components of the Technical Update have identified regeneration needs associated with these objectives. **Section 11.4.1** presents a set of subwatershed regeneration plans, which illustrate these regeneration needs, and **Section 11.4.2** proposes a short list of initial locations for strategically advancing regeneration priorities using an integrated regeneration planning approach.

11.4.1 Subwatershed Regeneration Plans

Regeneration priorities identified within each watershed study component have been compiled on a set of Subwatershed Regeneration Plans (see **Figure 11-1 for Key Map and Figures 11-2 to 11-11 for individual subwatershed maps**). Relevant information from municipal stormwater retrofit plans has been included on the plans. More technical details on the regeneration actions identified on the maps can be found in the relevant sections of the Technical Update report.

The Subwatershed Regeneration Plans are intended for use by a range of stakeholders and for a variety of purposes, including:

- Practitioners and implementers – Municipalities, NGOs, local interest groups, TRCA, other agencies and individuals. The maps serve as a preliminary guide to regeneration opportunities across the watershed and at the local scale. The maps help to coordinate local undertakings to ensure that regeneration activities are complementary, rather than conflicting. Working from a common set of priorities will enhance the likelihood that multiple benefits will be achieved. In practice, implementation funding may be more effectively pursued through partnerships.
- Policy makers and planners - The maps provide guidance on projects that may contribute to net environmental gain when required for planning applications or major infrastructure planning (e.g. Environmental Assessments)

Figure 11-1: Subwatershed Regeneration Plans – Key Map
 Subwatershed Regeneration Plans - Key Map

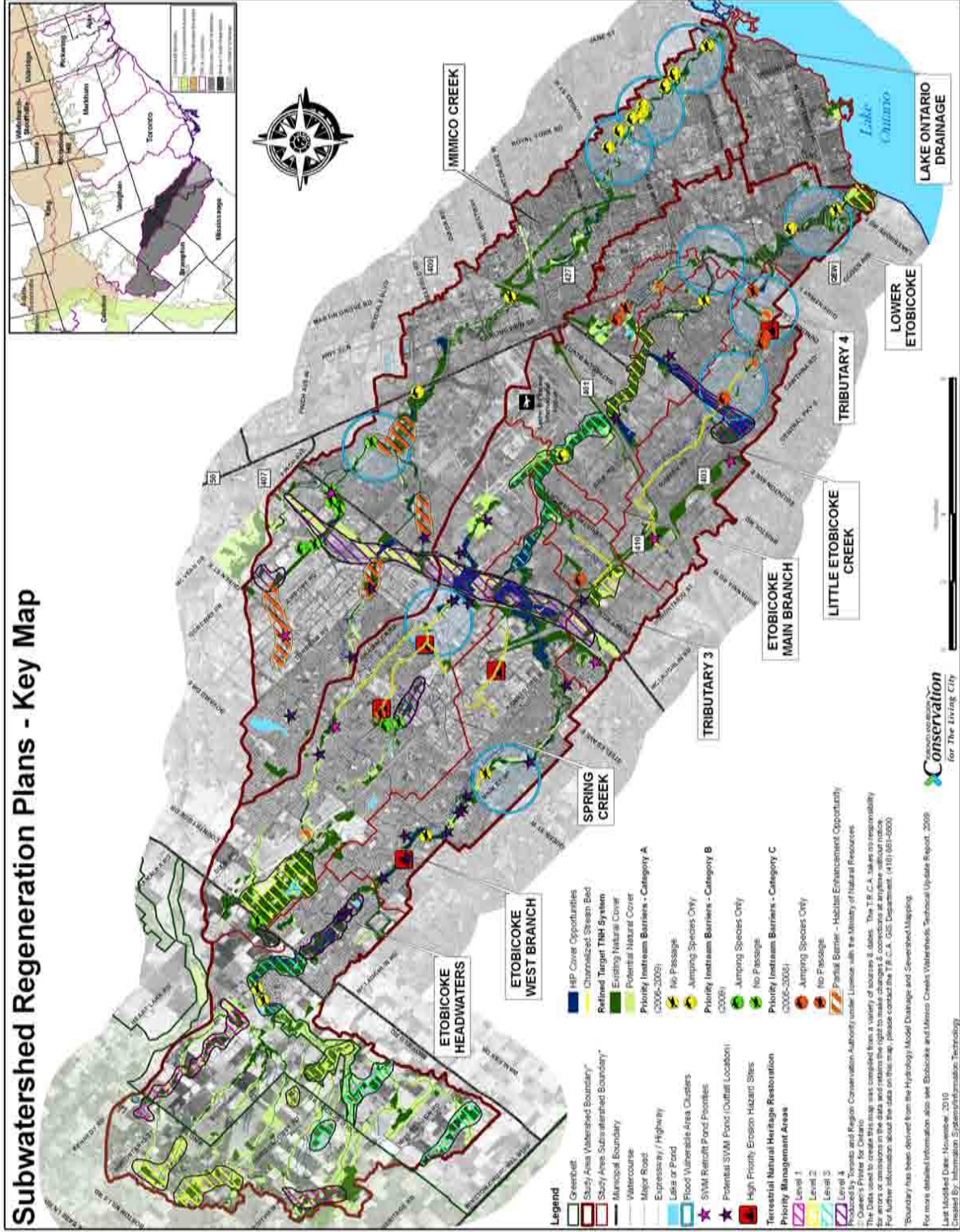


Figure 11-2: Etobicoke Creek Headwaters Subwatershed Regeneration Plan

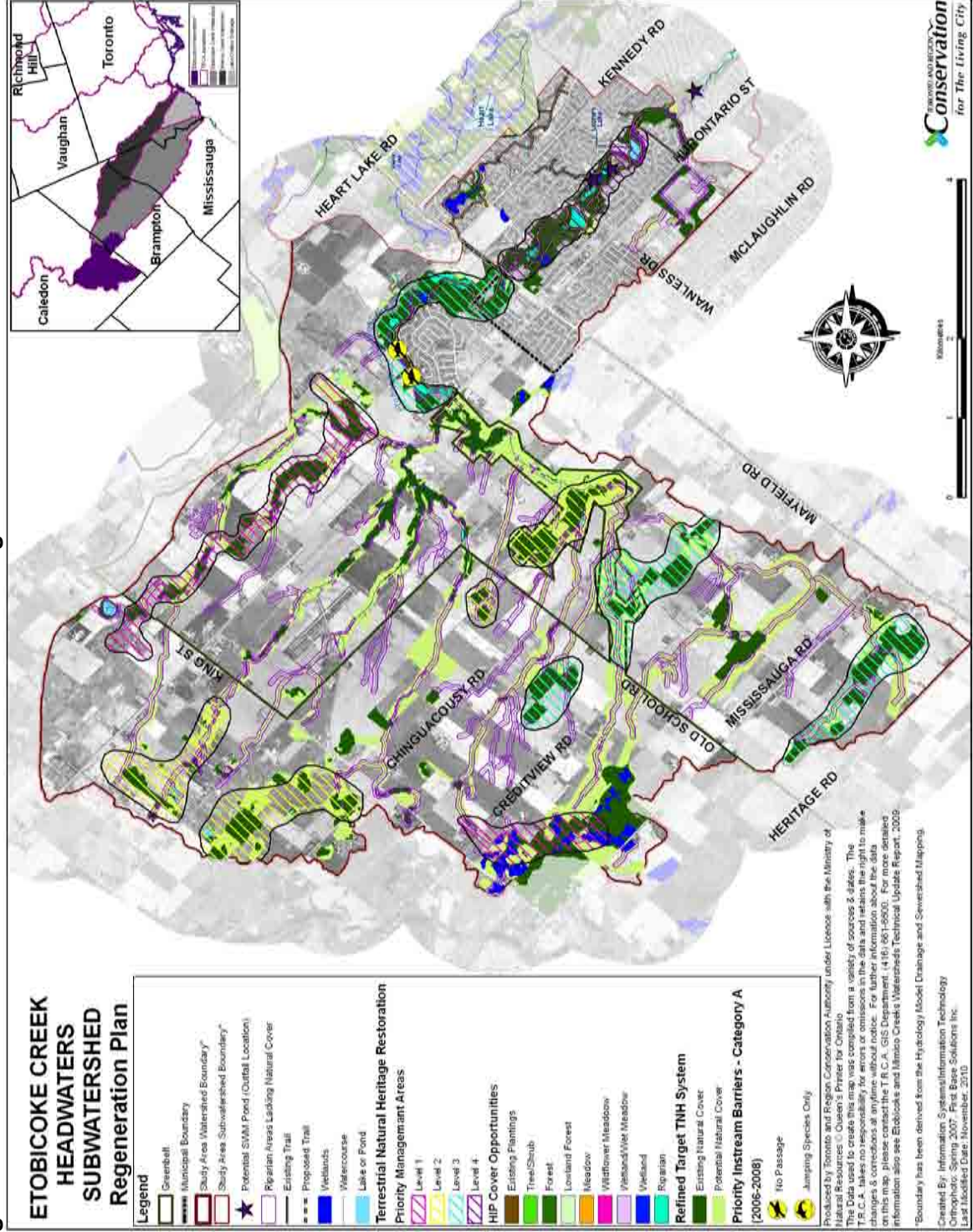


Figure 11-5: Tributary 3 Subwatershed Regeneration Plan

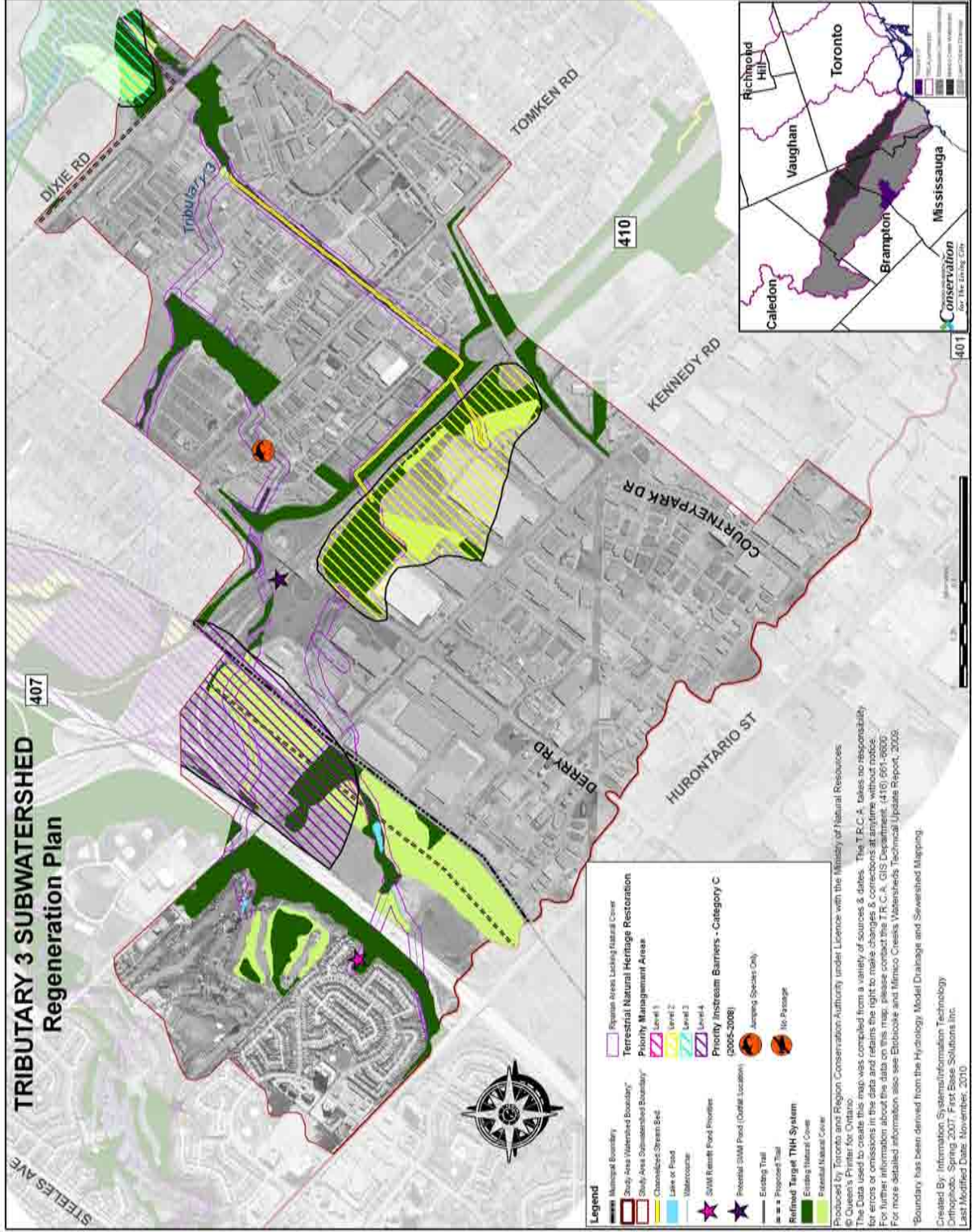


Figure 11-6: Etobicoke Creek Main Branch Subwatershed Regeneration Plan

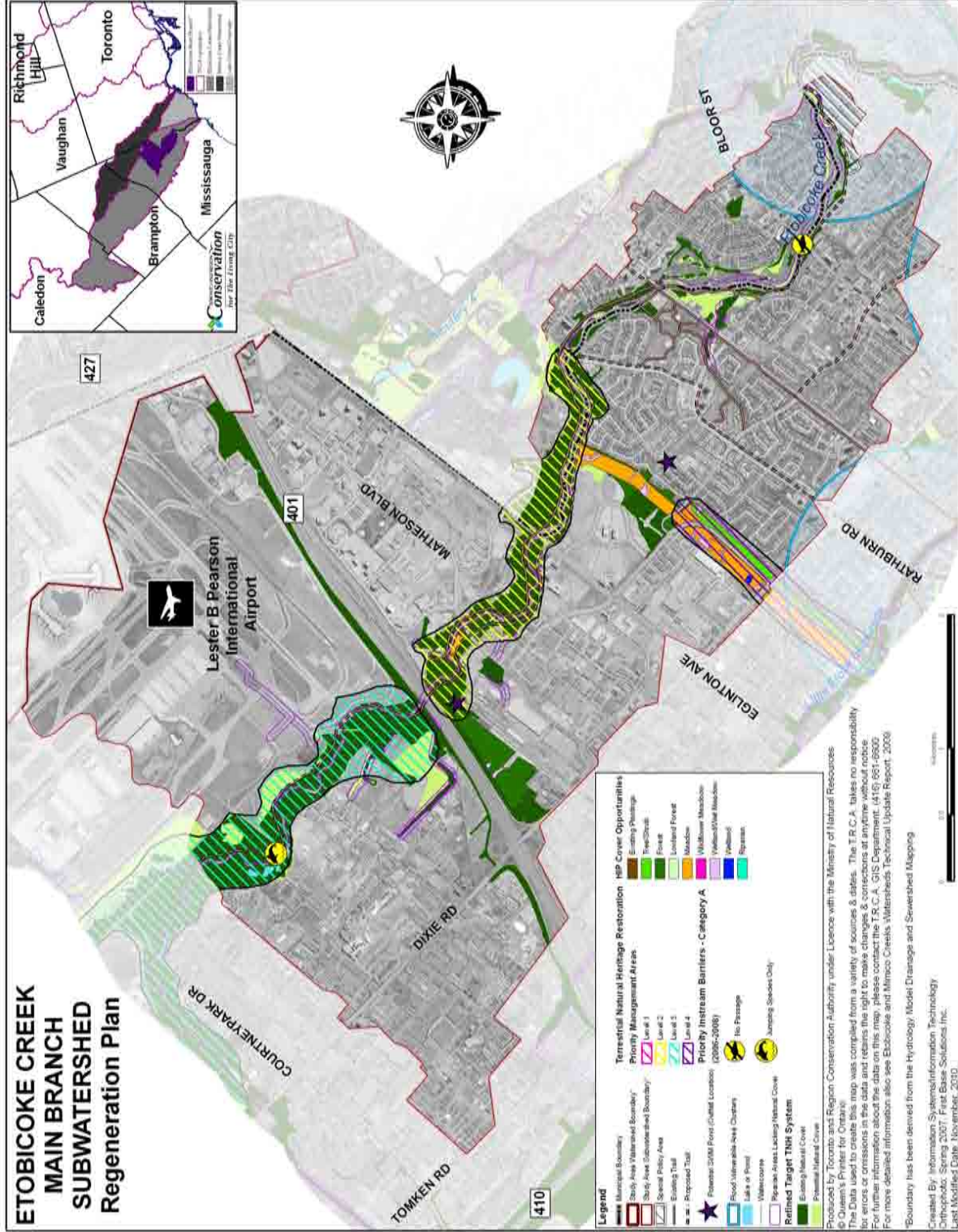


Figure 11-8: Tributary 4 Subwatershed Regeneration Plan

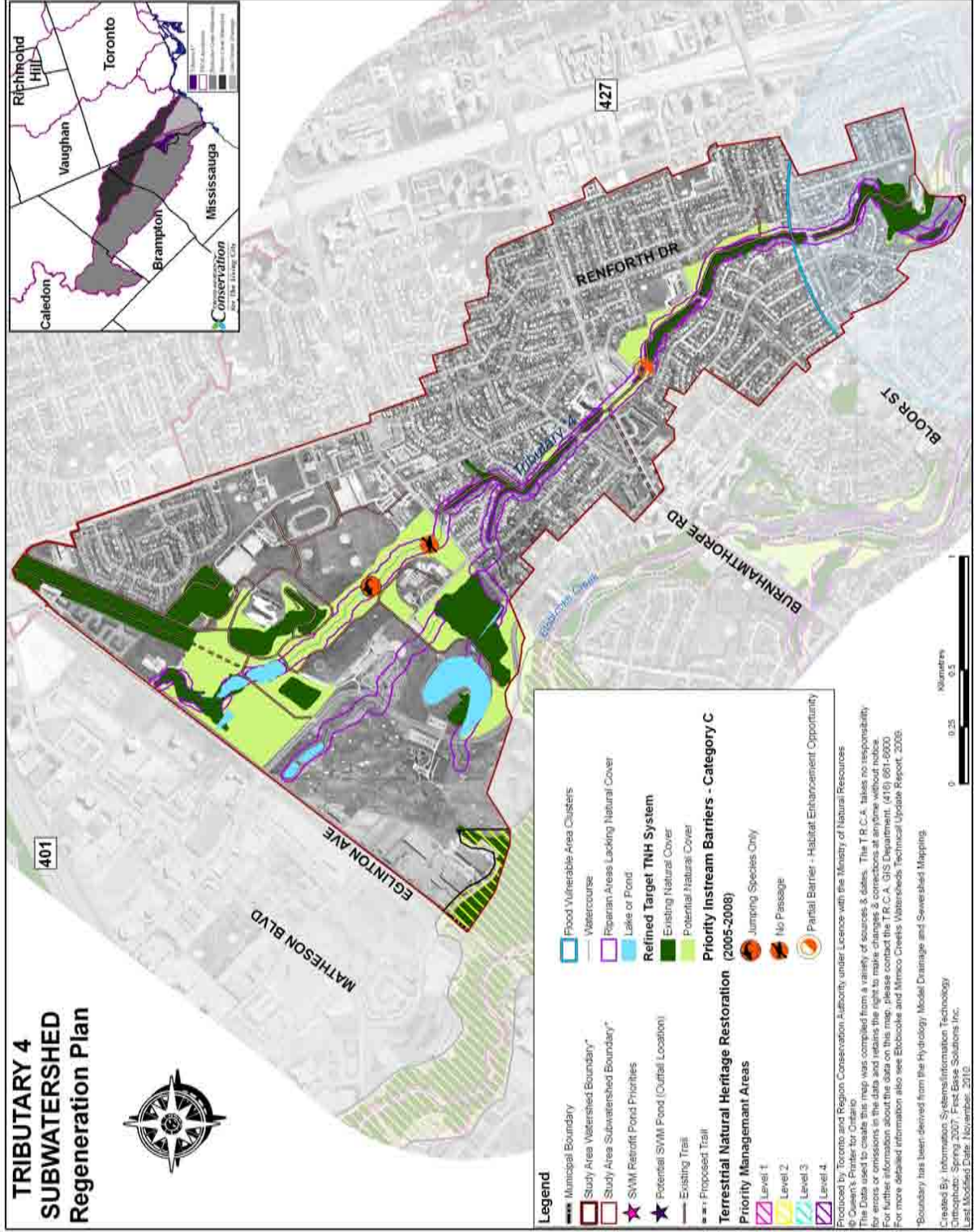


Figure 11-9: Lower Etobicoke Creek Subwatershed Regeneration Plan

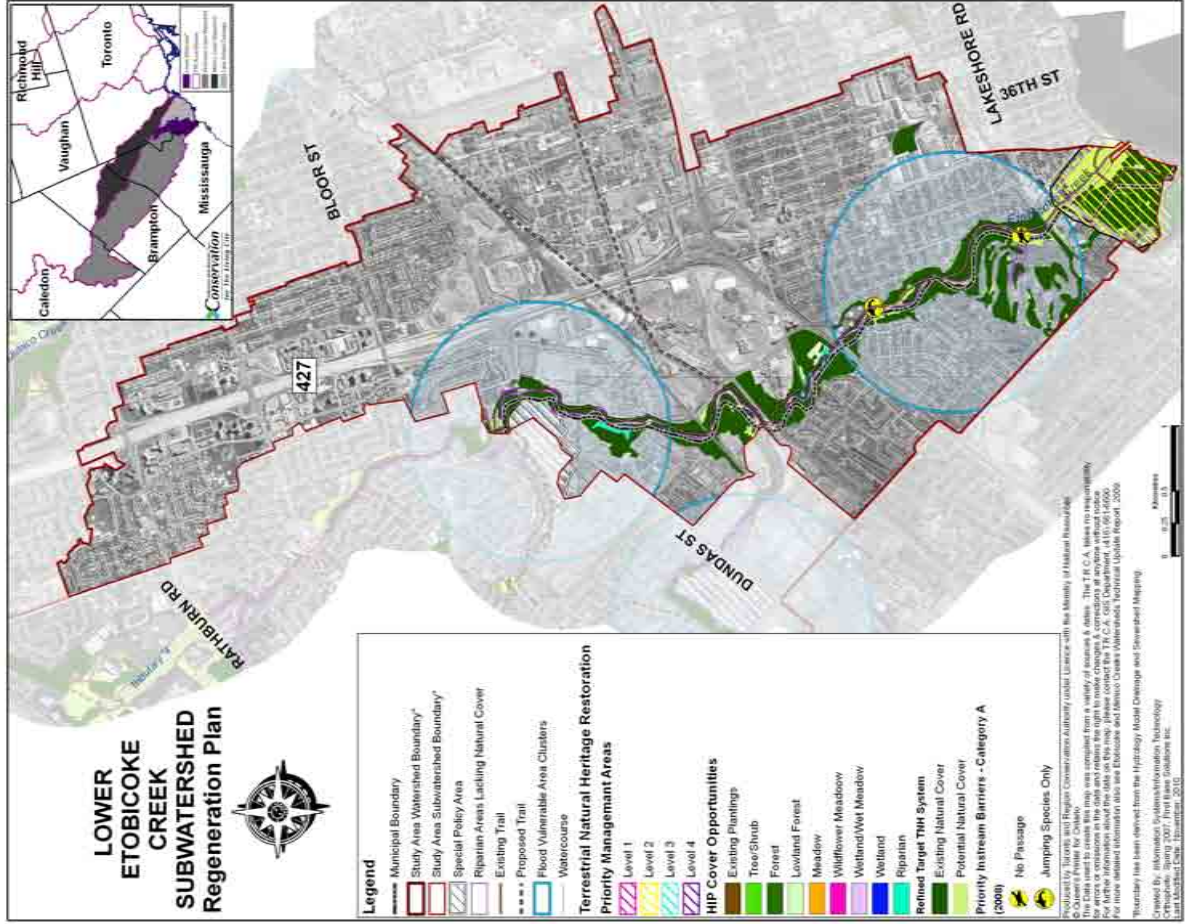


Figure 11-10: Lake Ontario Drainage Subwatershed Regeneration Plan

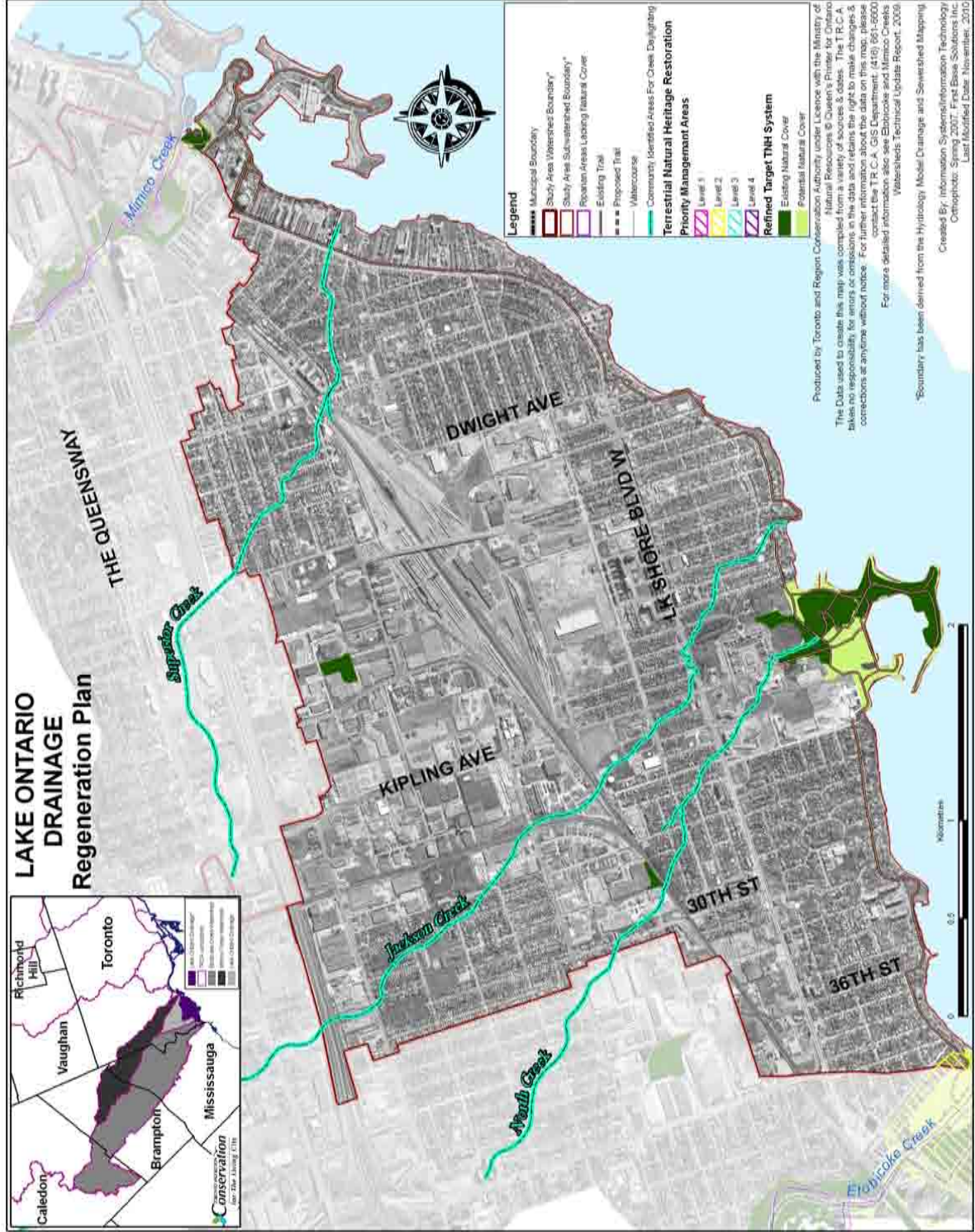
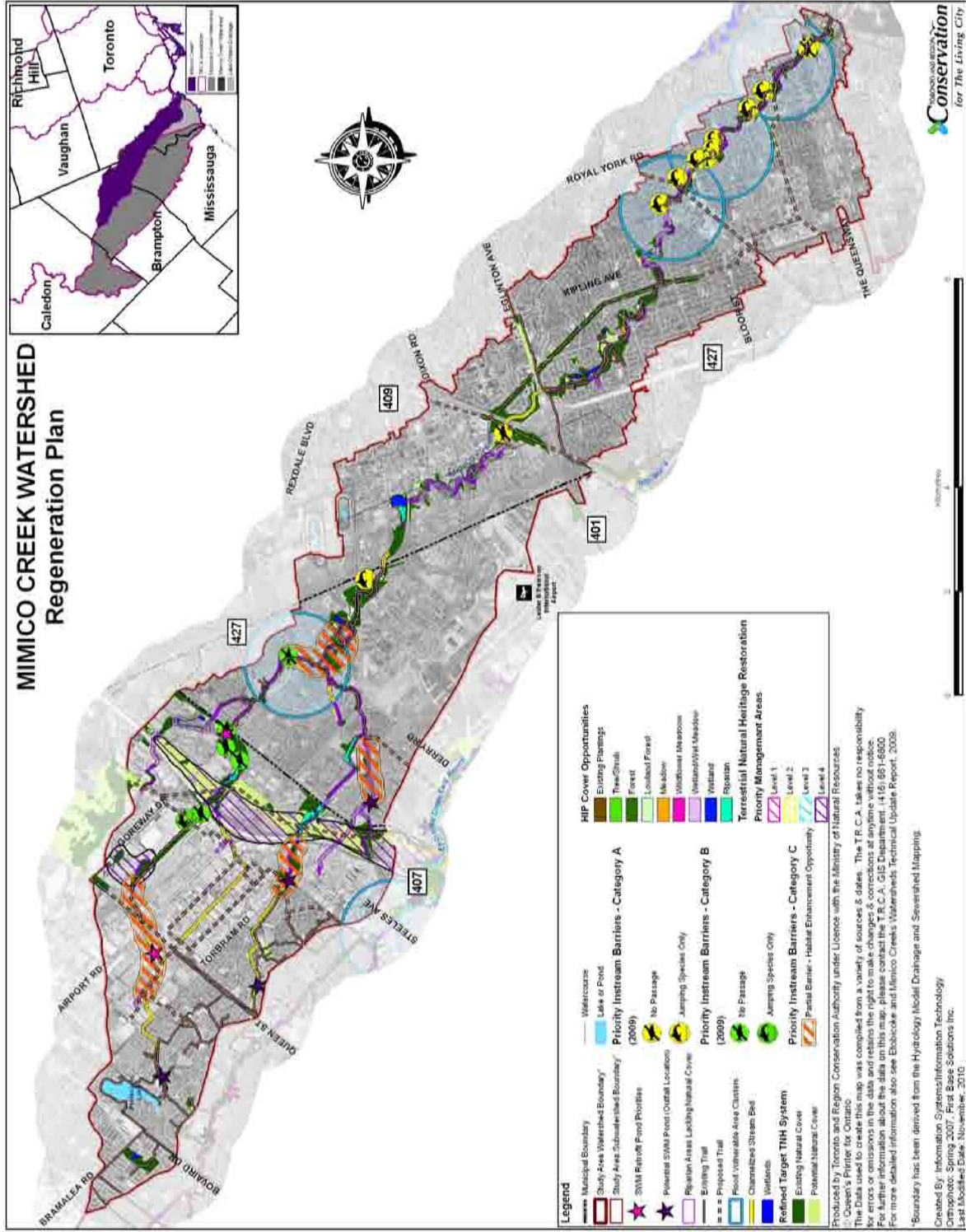


Figure 11-11: Mimico Creek Watershed Regeneration Plan



11.4.2 Priority Areas for Integrated Regeneration Projects

As shown on the Subwatershed Regeneration Plans, there are numerous regeneration actions recommended for these watersheds, having significant cost implications. Some degree of prioritization has been possible within individual theme areas as part of this Technical Update, and there have been separate strategies and plans produced (e.g. municipal stormwater retrofit strategies) which have also suggested priorities for implementation. This section discusses the need for an integrated, collaborative approach to regeneration implementation and explains the method used to identify a short list of priority areas for the initial focus of integrated regeneration projects.

Need for an integrated approach

An integrated approach applies a holistic, interdisciplinary assessment of options for multiple objectives and involves multiple stakeholders across property boundaries and mandates. In degraded urban watersheds where there are diverse regeneration needs (often several in the same location) and unique challenges, there are benefits in taking an integrated approach to regeneration implementation. Why?

- Difficult to make the business case for implementation of single solution retrofit/regeneration projects - *an integrated approach allows consideration of the co-benefits of alternative options and possible cost sharing among partners who gain mutual benefits;*
- Competing demands for limited real estate, especially in existing urban areas – *an integrated approach considers multiple objectives and determines optimal solutions and optimal use of land;*
- Design constraints associated with site-by-site, lot-by-lot, piecemeal approaches – *an integrated approach applied to a smaller catchment, neighbourhood or reach scale and for a broader range of objectives offers the opportunity for more creative, synergistic designs that demonstrate co-benefits;*
- Presence of many private and public sector stakeholders – *an integrated approach facilitates meaningful participation by all and development of a common vision for improvement;*
- Need to engage diverse private landowners regarding actions and behaviours on their lands (e.g. LID stormwater management options) – *an integrated approach considers innovative community based social marketing and community engagement approaches for incorporation into regeneration project planning and provides more flexibility to address the input received.*

Recent examples of integrated regeneration projects taking place in the Region of Peel include the Partners in Project Green: A Pearson Eco-Business Zone, being led by Partners in Project Green, and the County Court Sustainable Neighbourhood Retrofit Action Plan (SNAP), led by TRCA in partnership with the Region of Peel and City of Brampton. While both of these projects are in early stages, there are signs that more creative, effective and efficient solutions are emerging than would have otherwise in the absence of a coordinated and integrated approach. As these projects progress, lessons can be learned to inform the planning and implementation of future integrated regeneration projects.

Method for the identification of priority areas for integrated projects

While every opportunity for implementing the recommended regeneration/retrofit actions should be pursued, there is also a need to identify strategic, priority areas where partners can actively pursue the development of integrated regeneration projects. To identify these strategic areas, a principles-based methodology for prioritizing regeneration actions was used, as adapted from its application in the Don River Watershed Plan (TRCA, 2009). This methodology uses four principles-based criteria to guide priority setting:

- Urgency – actions that address potential threats to human health, safety and property; and the level of vulnerability to future stresses.
- Scale/Effectiveness – consideration of the geographic extent (e.g., area or length of stream or trail) that would benefit from the action and the magnitude of anticipated improvement.
- Ongoing Partnerships/Initiatives – consideration for opportunities to continue or build upon ongoing partnerships/initiatives, recognizing that work can be accelerated with the benefit of existing rapport and partner networks.
- Multiplicity of Benefits – consideration of the number of key subwatershed regeneration issues that the action would address and the number of watershed system components (e.g. groundwater, surface water, terrestrial and aquatic systems) that would benefit.

The following steps outline the method used to identify a short list of priority areas for the initial focus of integrated regeneration projects.

Step 1: Identification of priority regeneration areas/actions that address criteria of Urgency and Scale/Effectiveness.

Based on the Subwatershed Regeneration Plans and with consideration for the strategic management directions set out by this Technical Update, the following priority sites or areas are highlighted on **Figure 11-12 (Screening Map #1)**:

Urgency

- Flood vulnerable area (FVA) clusters – implications for remedial flood protection works within cluster zone and stormwater retrofit in the upstream catchment
- “High priority” Erosion hazard sites – need for remedial work
- Major Oaks Stormwater Pond site – potential need for future retrofit in association with rebounding groundwater levels

Scale/Effectiveness

- Municipal SWM retrofit priorities:

- SWM pond retrofit and potential new pond (outfall locations) priorities have been identified in Peel Region, with reference to comprehensive SWM retrofit studies of Caledon, Brampton and Mississauga, and the Etobicoke Creek Catchment 219 study.
- No priorities have been identified in the City of Toronto's near term capital works plans, based on findings of the Toronto Wet Weather Flow Management Plan.
- ICI land use – implications for stormwater retrofit actions to address high imperviousness (opportunity to make significant improvements in water balance management¹)
- Sandy, Sandy Loam and Loam Soils – implications for stormwater retrofit actions (i.e. potential for infiltration and significant improvements in water balance management²)
- Terrestrial natural heritage Priority Management Areas (Levels 1 and 2)
- Restoration Opportunity Planning priority areas (also referred to as Habitat Implementation Plans; HIPs) – locations where further desk-top and field analysis has been completed and provides readily available prescriptions for riparian, wetland, and reforestation projects
- Aquatic System – Priority Instream Barriers (Categories A and B)

Step 2: Identification of geographic areas that currently support “Ongoing Partnerships/Initiatives”

Ongoing or planned initiatives may represent vehicles for implementation of compatible regeneration projects. By identifying where an existing or planned partnership or initiative may align with an area of watershed regeneration needs, we may be able to expedite implementation by building on established partner relationships and realize efficiencies and economies of scale in implementation. In the case of major development or redevelopment planning, opportunities may exist to implement regeneration recommendations through the planning process. Three types of partnerships/initiatives were identified:

- *Ongoing regeneration partnerships and initiatives* (i.e. involving multiple agencies and groups; anticipated to continue over a multi-year period³) (See **Figure 11-13 – Screening Map #2A**);
- *Municipal capital works, including roads, water, sewer, watercourse works and transit infrastructure projects planned within the next 10 years (based on available information provided by municipalities)* (See **Figure 11-14 – Screening Map #2B**); and
- *Major development or re-development planning areas* (See **Figure 11-15 - Screening Map #2C**).

¹ Based on modelling study findings associated with Don River Watershed Plan (TRCA, 2009)

² Based on modelling study findings associated with Don River Watershed Plan (TRCA, 2009)

³ Screening Map #2A is not comprehensive, but aims to identify known, major partnership initiatives.

Figure 11-13: Screening Map #2A - Ongoing Regeneration Partnerships and Initiatives

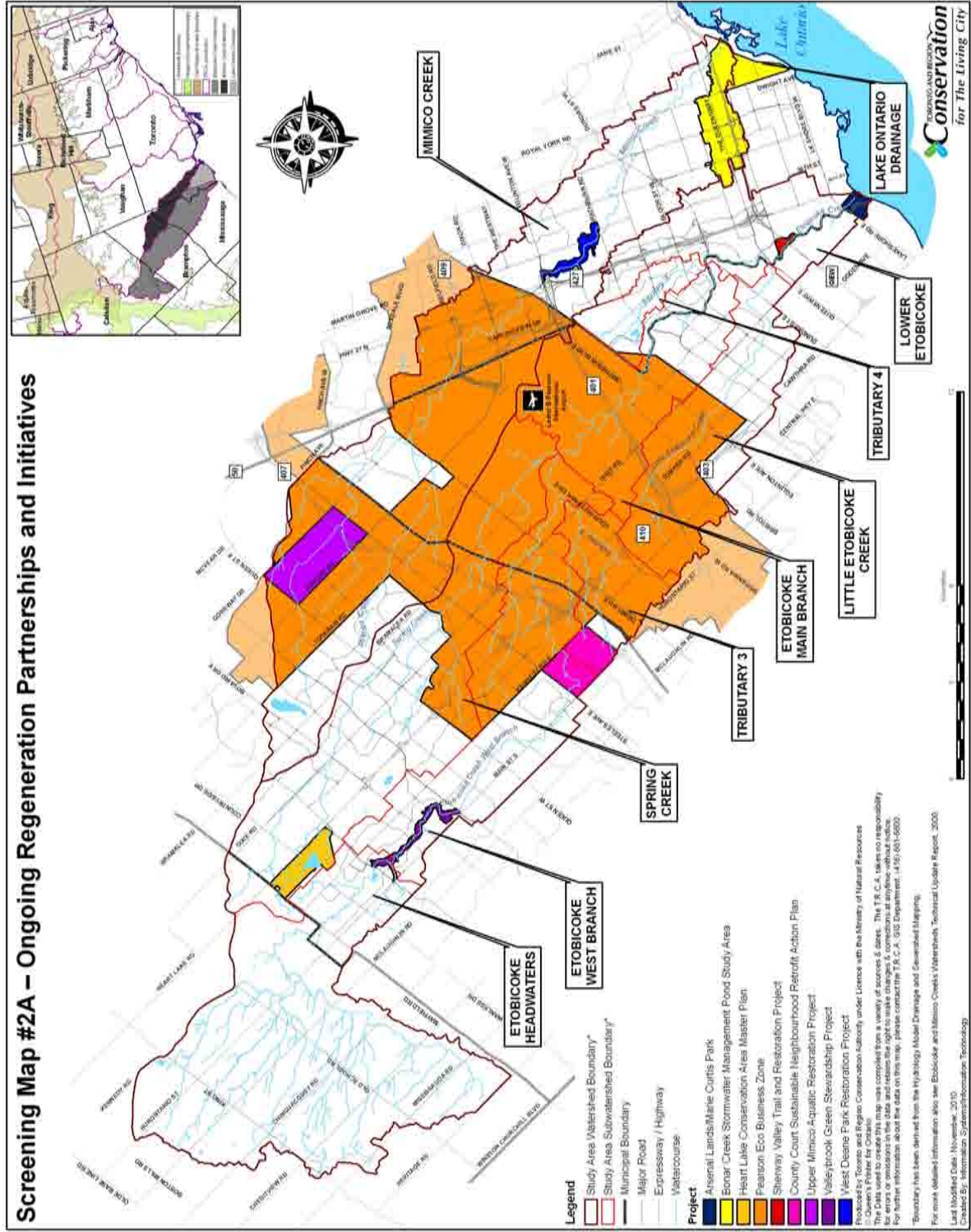
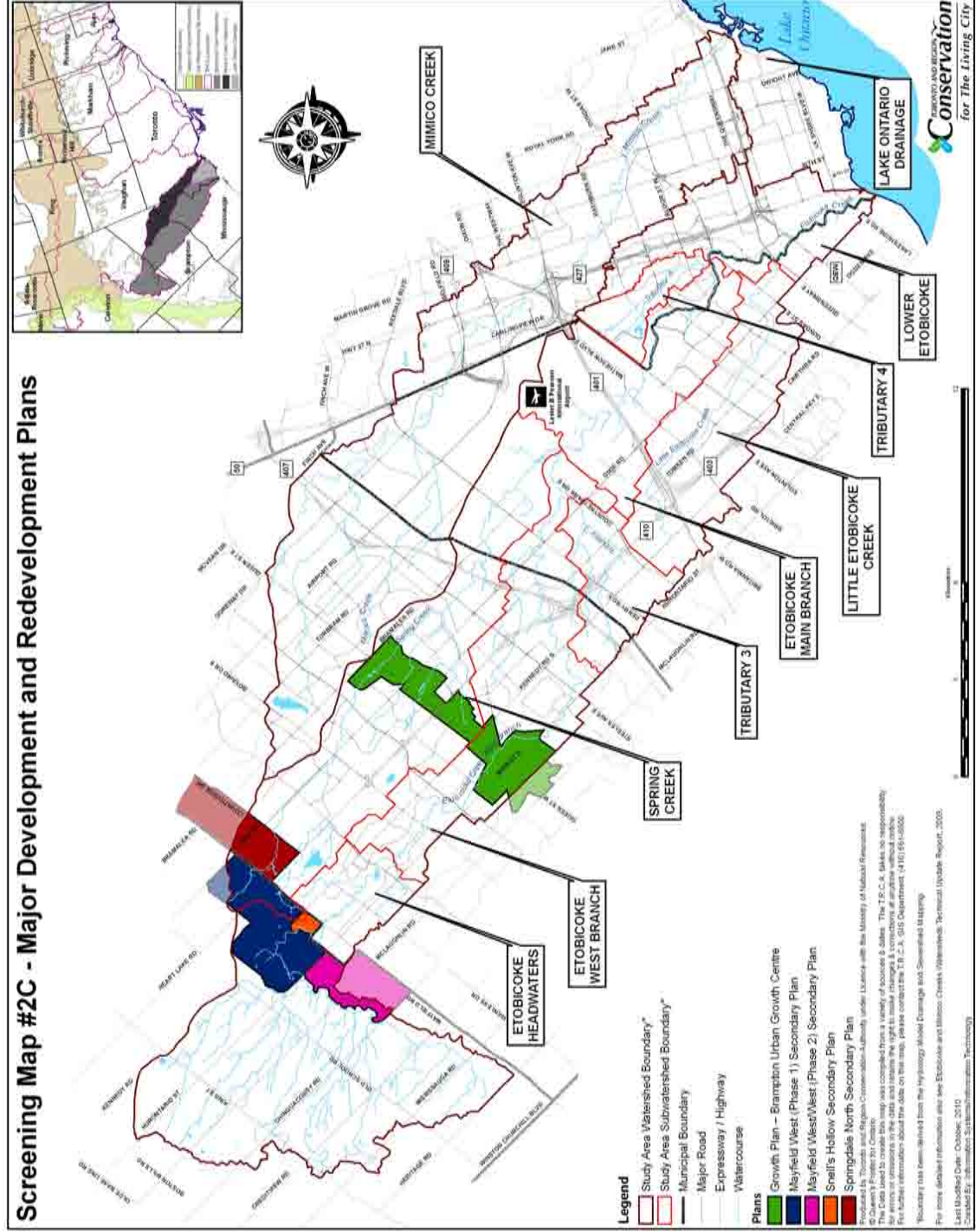


Figure 11-15: Screening Map #2C - Major Development or Re-development Planning Areas



Step 3: Identification of geographic areas in need of multiple regeneration actions, and which coincide with ongoing or planned initiatives (i.e. multiplicity of benefits)

This Step comprises the integrated aspect of this analysis by drawing upon information about the potential urgency, scale and effectiveness of regeneration actions, potential mechanisms to facilitate implementation, and our overall understanding of watershed system function and strategic management directions. The outcome of this step represents a set of priority geographic areas where implementation of regeneration actions would provide a multiplicity of benefits to the watershed and implementing partners.

The screening maps resulting from Steps 1 and 2 were reviewed to identify:

- Clusters of priority areas/sites where multiple (>3) regeneration actions of different types are needed; and
- Areas of clusters (as identified above) where implementation of the regeneration actions would especially contribute to the strategic watershed management directions (i.e. expand and enhance natural cover and habitat connectivity; and restore a more natural water balance); and
- Areas where major ongoing (or planned) partnerships or initiatives occur.

This exercise led to the recommendation of strategic, priority areas for the pursuit of integrated regeneration projects.

Recommended priority areas for integrated regeneration projects

Four priority areas for integrated regeneration actions have been identified, based on the multiplicity of benefits that would result from their implementation. The recommendations are based on considerations for urgency, scale and effectiveness of the anticipated outcomes, alignment with strategic watershed management directions (particularly with respect to improvements in SWM and TNHS) and potential to collaborate with a number of watershed partners on ongoing initiatives (See **Figure 11-16** and **Table 11-2**). The four priority areas include (in no particular order):

1. **Little Etobicoke Creek subwatershed** - Neighbourhood scale sustainability retrofits (LID SWM, urban forest, greenhouse gas reductions etc.), coordinated with municipal infrastructure projects (e.g. road work, channel work, SW pond retrofits) and linked to downstream flood and erosion hazard mitigation (likely to be aggravated by effects of climate change).
2. **Spring Creek subwatershed** – Headwaters habitat enhancements. Neighbourhood scale sustainability retrofits (LID SWM, urban forest, greenhouse gas reductions, etc.) and mid reach stream channel improvements, planned with further insights into the rebounding groundwater levels and coordinated with City of Brampton infrastructure projects (e.g. road work, SW outfall retrofits). Links to downstream flood and erosion hazard mitigation, likely to be aggravated by effects of climate change.
3. **Upper Mimico Creek East Branch subwatershed** – Headwaters regeneration emphasizing industrial neighbourhood scale SWM retrofits and aquatic habitat restoration.

4. **Pearson Eco-Business Zone** - Integration of LID SWM and local habitat regeneration project priorities with ongoing Partners in Project Green: A Pearson Eco-Business Zone greening initiatives.

Two additional areas have been identified as a focus for priority habitat enhancement work (See **Figure 11-16** and **Table 11-3**):

1. Etobicoke Creek Headwaters – Terrestrial Natural Heritage Regeneration
2. Lower Etobicoke Creek – Aquatic barrier mitigation and Terrestrial Natural Heritage Regeneration

Although these areas did not meet our screening criteria for >3 regeneration different types of priorities, they represent areas of significant priority with respect to habitat biodiversity objectives and can also contribute to other strategic objectives for improved watershed function.

The delineation of these priority areas for integrated regeneration action and habitat work is intended to serve as a basis from which watershed partners can develop long term workplans and budgets, while taking into account a broader range of considerations. **Tables 11-2 and 11-3** list the priority regeneration themes noted for each area, and which were the primary reasons for the area's selection. As more detailed stages of project scoping are undertaken, the full range of regeneration actions identified on the subwatershed regeneration plans in this Technical Update and local interests identified by watershed partners should be considered for inclusion in the project workplans. Similarly, more specific study area boundaries, project scope and timing can be defined in the context of additional local information. For example, a phased approach of undertaking smaller catchment scale regeneration projects may be deemed appropriate within the two subwatershed areas identified. Furthermore, certain aspects of the project may proceed in advance of others.

The multi-partner implementation models of Partners in Project Green: A Pearson Eco-business Zone and the Sustainable Neighbourhood Retrofit Action Plans (SNAPs, e.g. County Court SNAP) should be considered in the determination of workplan approaches for future integrated regeneration projects. Based on these models, major public and private landowners and existing program delivery agents will be key project partners and should participate in further project scoping and workplan development.

These priority areas and the actions recommended for each reflect the strategic management directions set out in this Technical Update. They will contribute greatly to the achievement of watershed management objectives and will help restore the natural resilience of the watershed to adapt to climate change. By taking an integrated, collaborative approach, the resulting undertakings offer many opportunities to advance other sustainability objectives in creative ways, while engaging diverse partners.

Other Candidate Areas

Three other areas were identified as having >3 regeneration actions, but have not been included as strategic priorities for the pursuit of integrated regeneration projects at this time.

1. **Lower Mimico Creek** – This area has numerous aquatic barriers, 3 FVA clusters and local sandy soils conducive to effective SW retrofit outcomes. Although these initiatives should be pursued as opportunities arise, upstream stormwater retrofit projects and headwaters aquatic and terrestrial habitat improvements in the Upper Mimico Creek and in the Pearson Eco-Business Zone will be of greater benefit to the stream as a whole and should be implemented first.
2. **Etobicoke Creek West Branch – Valleybrook Corridor** (vicinity of Bovaird Drive) – This area has several municipal stormwater outfall retrofit priorities, a Category A instream barrier mitigation need, a high priority erosion hazard and a multi-year Valleybrook Green Stewardship Project. Although the projects should be pursued as opportunities arise, there is less direct inter-relationship among these retrofit initiatives, than in other areas, and therefore potentially less benefit from pursuing them as an integrated project. This should be reviewed at such time as the City of Brampton proceeds with detailed planning of the stormwater retrofit projects.
3. **Downtown Brampton** (Etobicoke Creek West Branch, vicinity of Queen Street) – There is an FVA cluster in this area (including a designated Special Policy Area), as well as a Category A aquatic barrier mitigation need and several stormwater retrofit priorities. These regeneration needs should be addressed as part of the planning and redevelopment initiatives for the Brampton Urban Growth area.

Table 11-3: Priority Areas for Integrated Regeneration Projects

1. Little Etobicoke Creek Subwatershed	
<p>Overall Themes</p>	<p>Neighbourhood scale urban sustainability measures (LID SWM, urban forest, greenhouse gas emission reductions etc.) coordinated with City of Mississauga and Region of Peel infrastructure projects, including SW pond retrofits. Links to downstream flood and erosion hazard mitigation, particularly in anticipation of aggravated effects of climate change.</p>
<p>Regeneration priorities*</p>	<ul style="list-style-type: none"> • Stormwater retrofit – most of this subwatershed has no SWM control (except for a small upper portion which has quantity, quality and erosion control). LID type SW retrofits could help restore a more natural water balance and contribute to improved water quality and erosion control. ICI land use in upper half of subwatershed and sandy soil conditions coupled with pockets of ICI land use in lower subwatershed represent areas where LID retrofits could be especially effective. Two City of Mississauga priority end of pipe SWM retrofit facilities lie in the upper subwatershed near Hwy 410 and 401 and Hwy 403 and Eglinton. The City has already completed other SWM pond retrofit projects in this area. • Flood vulnerable area management – two FVA clusters lie in lower end of subwatershed in the vicinity of Rathburr/Tomkin and Dixie/Dundas roads. Flood remedial works, including flood control channels and flood walls, have already been installed, particularly in the Dixie/Dundas area. Flood risk is primarily associated with larger, less frequent storm events, which are likely to become more frequent under climate change scenarios. Upstream SWM retrofits and continued maintenance of local remedial work would alleviate risk. Note that TRCA is undertaking a flood risk assessment for Dixie/Dundas SPA in 2011. • Erosion hazard management – TRCA Erosion Hazard Site LE1-ESA1 (near Dixie Road and Bloor Street): Maintenance of failed bank stabilization measures would prevent additional erosion and minimize risk to a nearby detached home. • Terrestrial natural heritage regeneration – detailed Habitat Implementation Planning has already been completed for the Little Etobicoke Creek corridor from the headwaters to the confluence with Etobicoke Creek. Terrestrial Priority Management Area #20 (Level 4), Eastgate Parkway: This site is an annex to Priority Site #19 and exists as an opportunity to create an east – west linkage between the lower Etobicoke Creek and the neighbouring Credit Valley Watershed. The site comprises a fauna biodiversity hotspot connected via the restoration potential within and beyond an extensive hydro corridor running along Eastgate Parkway. There is an opportunity to expand the existing forest patch on the west end into a significant habitat core. Regeneration implementation should be coordinated with the bus rapid transit way. Restoration within the hydro corridor would not include trees. • Other regeneration considerations: <i>regeneration of potential natural cover (part of target TNHS), mitigation of Category C aquatic barriers through community-led stewardship initiatives, integration of urban forest and other sustainability practices linked to implementation of lot level LID SWM measures in the community (see Little Etobicoke Creek Subwatershed Regeneration Plan). Note also the particular local relevance of climate change adaptation and mitigation actions to the hazards in this area.</i>

<p>Ongoing Partnerships or Initiatives</p>	<ul style="list-style-type: none"> • City of Mississauga - several planned road projects north of Dundas St. in the lower end of the subwatershed • City of Mississauga – planned erosion control and channel works project (2016-2018), roughly south of Rathburn Rd. and west of Tomkin Road. • Region of Peel – proposed water reservoir, pumping and water transmission and distribution feeder main (2011-2031) • <i>Major redevelopments (e.g., at Dixie/Dundas) could provide further opportunities for regeneration on private lands.</i>
<p>Watershed</p>	<ul style="list-style-type: none"> • Etobicoke Creek
<p>Key partners</p>	<ul style="list-style-type: none"> • Region of Peel, City of Mississauga, TRCA
<p>2. Spring Creek Subwatershed</p>	
<p>Overall Themes</p>	<p>Complete implementation of Heart Lake Conservation Area Master Plan and local headwaters terrestrial and aquatic habitat enhancements. Based on findings of the further investigation of the rebounding groundwater levels, develop more detailed plans for Major Oaks Stormwater Pond retrofit (as necessary), local habitat regeneration and neighbourhood sustainability in the mid reaches. Neighbourhood scale urban sustainability measures (LID SWM, urban forest, greenhouse gas emission reductions etc.) throughout the mid and lower reaches, coordinated with City of Brampton infrastructure projects, including SW outfall retrofits. Links to downstream flood and erosion hazard mitigation, particularly in anticipation of aggravated effects of climate change.</p>
<p>Regeneration priorities*</p>	<p>Heart Lake Conservation Area</p> <ul style="list-style-type: none"> • Terrestrial natural heritage regeneration – Priority Management Area #12 (Level 2): Restoration opportunities at this site are somewhat limited. Enhancement and management of existing habitat is indicated, particularly in the north end of the property. Management should include the control of invasive species and the mitigation of Matrix Influence (visitor pressures) through appropriate trail design. Management should also ensure that the Conservation Area does not become isolated as local development continues (to the north and east). Maintenance and improvement of surrounding habitat - creating effective corridors - will be of significant importance along watercourses to the east of Heart Lake Road (e.g. painted turtle migrations have been observed in 2010); likewise to the north and north-west in the vicinity of Mayfield (connecting to Snelgrove). Much of the site includes patches with poor shape attributes and therefore the maximum Species of Concern Point Density Surrogate is 6 points although this is lower than scores for fauna, flora and vegetation communities of concern. Note that there are extensive patches of natural cover to the south of HLCA that have yet to be inventoried for ELC: south of Sandalwood Parkway, toward Bovaird Drive. There are a series of incidental fauna records from these areas. • Aquatic barrier mitigation - Category B - Perched culvert at Mayfield Road west of Heart Lake Road permits no passage (Barrier SPHL014) • Ongoing implementation of Heart Lake Conservation Area Master Plan

	<p>Bramalea Tributary catchments and mid Spring Creek (roughly between Bovaird Dr. and Steeles Ave)</p> <ul style="list-style-type: none"> • Anticipated regeneration actions as outcome to groundwater recovery management plan in the vicinity of the Brampton Esker (e.g. possible stormwater pond outfall retrofit at Major Oaks Pond, aquatic habitat enhancements, wetland creation) • Stormwater retrofit – Most of this sub-catchment has no SWM control. LID type stormwater retrofits would aim to restore a more natural water balance and contribute to water quality and erosion control objectives. Extensive pockets of ICI land use in the western and southern portions of this sub-catchment represent areas where LID measures could be especially effective. City of Brampton has undertaken sediment removal at the on-line Chinguacousy SWM pond retrofit site and has identified other priority outfall retrofits, including outfall 13 at Spring Creek and Williams Parkway. • Flood vulnerable area management – an FVA cluster lies in the lower end of this sub-catchment in the vicinity of Steeles Ave. Many of these tributaries have been channelized. Flows tend to be flashy with rapid water level rise following rain events, posing potential public safety concerns and downstream erosion potential in natural reaches. Flood remedial work may involve redesign of undersized culverts, public safety improvements and improved integration of hydraulic and ecological channel designs. Upstream SWM retrofits would also contribute to an alleviation of flood risk. Public safety risks associated with this flashy system are likely to be further aggravated under future climate change scenarios, as extreme rainfall events are expected to occur more frequently. • Erosion hazard management – two high priority erosion hazard sites are located on the Bramalea Avondale Branch, one in the vicinity of Queen St. (TRCA Erosion Hazard Site TS2-ESA3) and the other at the confluence with Bramalea Orenda Branch (TS2-ESA1). At both sites increased flows have exceeded the capacity of the existing concrete lined channel, causing bank scour and creating a risk to nearby homes. Large scale channel rehabilitation and stabilization efforts are required to prevent further erosion and protect private property. • Aquatic barrier mitigation - 2 Category B – Weir north-west of Queen St and Hillside Dr. permits no passage (Barrier SPBRWE009) and Weir north-west of Queen St. and Hillside Dr. permits passage by jumping species only (Barrier SPBRWE012) <p>Lower Reaches Spring Creek (Steeles to confluence)</p> <ul style="list-style-type: none"> • Stormwater retrofit – Current levels of SWM control in this sub-catchment range from no control to some quantity, quality and erosion control. LID type SWM measures would aim to restore a more natural water balance and contribute to improved water quality and erosion control. Extensive ICI land use in this area represents areas where SW retrofits could be especially effective. The City of Brampton has also identified several outfall retrofit priorities, including outfall 22 (near Dixie and Steeles) and outfall 23 (near Steeles and Bramalea). <p>Other regeneration considerations: <i>regeneration of potential natural cover (part of target TNHS), mitigation of a Category C aquatic barrier through community-led stewardship initiatives, integration of urban forest and other sustainability practices linked to implementation of lot level LID SWM measures in the community (see Spring</i></p>
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	<p><i>Creek Subwatershed Regeneration Plan). Note also the particular local relevance of climate change adaptation and mitigation actions to the hazards in this area.</i></p> <p>Heart Lake Conservation Area</p> <ul style="list-style-type: none"> • TRCA's ongoing implementation of the Conservation Area Master Plan in cooperation with the Heart Lake Advisory Committee <p>Bramalea Tributary Catchments</p> <ul style="list-style-type: none"> • City of Brampton – designated Growth Centre along Queen St. • City of Brampton - Zum rapid bus transit along Queen St. (2010+) • City of Brampton – road projects south of Queen St. between Hwy 410 and Dixie Rd (2016) • City of Brampton – road projects along Williams Parkway between Hwy. 10 and Dixie Rd (2013, 2014, 2016) <p>Lower Reaches</p> <ul style="list-style-type: none"> • Partners in Project Green • Etobicoke Creek • Region of Peel, City of Brampton, TRCA, Partners in Project Green
<p>Watershed</p>	
<p>Key partners</p>	
<p>3. Upper Mimico Creek East Branch Subwatershed</p>	
<p>Ongoing Partnerships or Initiatives</p>	<p>Mimico Creek headwaters enhancement - Continue to build on the Upper Mimico Creek aquatic restoration project and Partners in Project Green: A Pearson Eco-Business Zone initiatives with industrial neighbourhood scale urban sustainability measures (including LID SWM, urban forest, greenhouse gas emission reductions etc.) coordinated with City of Brampton SWM pond retrofit projects, aquatic barrier mitigation and habitat restoration.</p> <ul style="list-style-type: none"> • Stormwater retrofit – most of this subwatershed has quantity control only, with small pockets having no to varying levels of stormwater control. LID type SW retrofits would aim to restore a more natural water balance and improve water quality and erosion control. Extensive ICI land use in upper half of sub-catchment represents an area where SW retrofits could be especially effective. Two City of Brampton priority end of pipe SWM retrofit facilities lie in the subwatershed. Industrial Nine pond is an on-line dry pond located north of Queen St near Airport Road. Kenfask Pond is also an on-line dry pond, located near Steeles Ave. and Goreway Dr. • Flood vulnerable area remediation - an FVA cluster lies in lower end of this sub-catchment in the vicinity of Derry Rd. Upstream SWM retrofits and local remedial work would alleviate risk. • Aquatic barrier mitigation – Category B – Railway crossing north-east of Goreway Drive and Brandon Gate Drive (MCE-11); Weir north-west of Hwy 407 and Goreway Drive (MCE049); Weir south of Intermodal Drive (MCE050) – barriers permit no passage. • Terrestrial natural heritage regeneration – detailed Habitat Implementation Planning has already been completed for the several valley corridor areas south of Steeles Ave. • Other regeneration considerations: <i>regeneration of potential natural cover (part of target TNHS), aquatic habitat enhancement areas (see Mimico Creek Watershed Regeneration Plan)</i> • Partners in Project Green: A Pearson Eco-Business Zone

	<ul style="list-style-type: none"> • Upper Mimico Aquatic Restoration Project • Mimico Creek • Region of Peel, City of Brampton, TRCA, Partners in Project Green: A Pearson Eco-Business Zone
Watershed	
Key partners	
4. Pearson Eco-Business Zone – Improved SWM and Habitat Regeneration	
Overall Themes	Integration of LID SWM and local habitat regeneration project priorities with ongoing Partners in Project Green: A Pearson Eco-Business Zone greening initiatives.
Regeneration priorities*	<ul style="list-style-type: none"> • Stormwater retrofit – LID type SW retrofits would aim to restore a more natural water balance and contribute to improved water quality and erosion control. Extensive ICI land use in central portion of the two watersheds represents an area where SW retrofits could be especially effective at achieving runoff volume reductions. Several municipal SW outfall retrofit priorities have been identified. • Terrestrial Natural Heritage regeneration - 2 Level 2 – Priority Management Area #17 (Derry Rd and Hwy 410): This site is very isolated in a highly urbanized landscape. There is a good number of L4 fauna species locally and the presence of a small but healthy stand of the regionally rare (L3) shagbark hickory (<i>Carya ovata</i>) within a regionally rare ELC community (FOD 9-4) is highly significant. In such a landscape the opportunities for enhancing faunal biodiversity are minimal, however, maintaining this stand of shagbark is extremely important in terms of the local seed-bank (and particularly in the light of climate change since this species is a Carolinian species). <p>Priority Management Area #19 (Matheson Blvd. and Etobicoke Creek Main Branch): This site would require management, restoration and enhancement. Steps should be taken to improve the size and shape of existing patches where possible, and to ensure good connectivity with expanded habitats within Centennial Park to the east, the hydro corridor to the west, and to Burnamthorpe Rd. to the south.</p> <ul style="list-style-type: none"> • Aquatic barrier mitigation – Category A – Weir at Britannia Rd. east of Dixie Rd. (ECL0W029) permits passage by jumping species only. • Other regeneration considerations: Opportunity for integration with other green building retrofits and sustainability initiatives ongoing as part of Partners in Project Green: A Pearson Eco-Business Zone • Partners in Project Green: A Pearson Eco-Business Zone
Ongoing Partnerships or Initiatives	
Watershed	• Etobicoke Creek and Mimico Creek
Key partners	• Partners in Project Green: A Pearson Eco-Business Zone, including the following municipal partners: Region of Peel, City of Brampton, City of Mississauga, City of Toronto (and TRCA).

*Regeneration Priorities noted in this table address considerations for urgency and scale/effectiveness of the anticipated outcomes; See Subwatershed Regeneration Plans for a more comprehensive range of regeneration actions recommended for these areas.

Table 11-4: Priority Areas for Habitat Regeneration Projects

1. Etobicoke Creek Headwaters Terrestrial Natural Heritage Regeneration	
Regeneration priorities	<ul style="list-style-type: none"> • Terrestrial Priority Management Areas (PMA) - 2 Level 1 and 4 Level 2 patches lie in the headwaters, but there are also several Level 3 and 4 patches identified – A headwaters terrestrial natural heritage regeneration project would address implementation recommendations association with these priority management areas. Further implementation prescriptions for riparian, wetland and reforestation restoration opportunities for PMAs and other headwater areas are being identified as part of a more detailed desktop and field based assessment (TRCA-Restoration Services Section, 2010). • See <i>Etobicoke Creek Headwaters Subwatershed Regeneration Plan and Section 8.0 (Terrestrial Natural Heritage)</i> for detailed locations and descriptions of each priority management area. • Other considerations: <i>Coordinate this work with other private land stewardship initiatives.</i>
Ongoing Partnerships or Initiatives	<ul style="list-style-type: none"> • Mayfield West Secondary Plan (Phases 1 and 2) – implementation should consider addressing terrestrial natural heritage regeneration needs • Peel Rural Water Quality Program • Etobicoke Creek • Region of Peel, Town of Caledon, TRCA
Watershed	Etobicoke Creek
Key partners	Region of Peel, Town of Caledon, TRCA
2. Lower Etobicoke Creek - Aquatic Barrier Mitigation and Terrestrial Natural Heritage Regeneration	
Regeneration priorities	<ul style="list-style-type: none"> • Aquatic barrier mitigation - 2 Category A – Weir at Toronto Golf Club permits no passage (ELOW006; mitigation project is underway) and Weir south of QEW bridge (ELOW011) permits passage of jumping species only. • Terrestrial natural heritage regeneration - Level 2 - Priority Management Area #20 at the Arsenal Lands/Marie Curtis Park: There is potential at this site to restore lakefront species and community types (beach/dune communities); such opportunities are among the most limited in our jurisdiction. There is also large scale potential to enhance the mature forest at this site. The maximum Vegetation Community of Concern % Cover score for this area is 10 points – very high for the lower reaches of the Etobicoke/Mimico watersheds and in part this high score is due to the presence of regionally scarce coastal communities. • Flood vulnerable area management – an FVA cluster lies in lower Etobicoke Creek sub-catchment. Local SWM retrofits would help contribute to reduced flood risk, particularly due to the predominance of sandy soils conditions (conducive for infiltration), however more significant benefits from previously noted upstream SW retrofit projects (e.g. Little Etobicoke Creek subwatershed, Partners in Project Green: A Pearson Eco-Business Zone, etc.) and local flood remedial works will likely be required to fully address this risk. Therefore, the emphasis of this project is on habitat regeneration.

Etobicoke and Mimico Creeks Watersheds Technical Update Report

Ongoing Partnerships or Initiatives	<ul style="list-style-type: none"> • Toronto Golf Club • Arsenal Lands/Marie Curtis Park Master Plan
Watershed	<ul style="list-style-type: none"> • Etobicoke Creek
Key partners	<ul style="list-style-type: none"> • Region of Peel, City of Mississauga, City of Toronto, TRCA

11.5 Summary of Implementation Priorities by Watershed Partner

The information contained in this Technical Update is meant to inform the ongoing implementation of policies and programs by TRCA and its watershed partners. As already noted, many ongoing programs already contribute to our watershed management objectives, and these efforts should be continued with the added insights from this report. Many other initiatives are emerging, and these should incorporate this report's recommendations. To assist in priority setting, the key **new** implementation actions for each watershed municipality, the TRCA, and the Etobicoke and Mimico Watersheds Coalition are summarized. Of course there are many more government and community partners in implementation, who will find in this report useful guidance for their work.

Region of Peel

1. Identify ways to incorporate the new policy directions in Official Plan updates, if mechanisms do not already exist.
2. Coordinate the development of a Regional Stormwater Management Strategy in cooperation with TRCA, CVC and the three area municipalities.
3. Incorporate the strategic recommendations for restoring the natural function and resilience of the watersheds in the climate change mitigation and adaptation strategy being prepared for the geographic region of Peel.
4. Continue to support TRCA for the Regional Watershed Monitoring Network and implementation of the recommended monitoring enhancements.
5. Collaborate with TRCA and the City of Brampton on the further investigation of rebounding groundwater levels in the vicinity of the Brampton Esker and development of a management strategy, as necessary.
6. Participate with and support TRCA and the City of Brampton in the completion and evaluation of the County Court Sustainable Neighbourhood Retrofit Action Plan (SNAP), as a demonstration of an integrated regeneration project approach.
7. Support the implementation of the recommended integrated regeneration projects, habitat-focused projects and other noted regeneration needs, by incorporating regeneration initiatives into Regional infrastructure projects wherever possible, and participating with TRCA and others in further project scoping and implementation for identified regeneration project priorities (such as through Partners in Project Green: A Pearson Eco-Business Zone, future SNAPS etc.).

Town of Caledon

1. Identify ways to incorporate the new policy directions in Official Plan updates, if mechanisms do not already exist.

Etobicoke and Mimico Creeks Watersheds Technical Update Report

2. Use the updated technical information, management recommendations and policy directions to guide greenfield development plans for Mayfield West Phase 2.
3. Participate in the development and implementation of a Regional Stormwater Management Strategy in cooperation with the Region of Peel, TRCA, CVC and the other area municipalities, and continue to advance the implementation of the Town's stormwater management and retrofit programs.
4. Protect and enhance terrestrial natural heritage in the headwaters of Etobicoke Creek through participation in an Etobicoke Creek Headwaters Terrestrial Natural Heritage Regeneration project.

City of Brampton

1. Identify ways to incorporate the new policy directions and regeneration implementation in growth planning exercises associated with the Brampton Downtown Growth Centre and in updated policies of the Brampton Environmental Master Plan and Official Plan updates, if mechanisms do not already exist.
2. Collaborate with TRCA and the Region of Peel on the further investigation of rebounding groundwater levels in the vicinity of the Brampton Esker and development of a management strategy, as necessary.
3. Participate in the development and implementation of a Regional Stormwater Management Strategy in cooperation with the Region of Peel, TRCA, CVC and the other area municipalities, and continue to advance the implementation of the City's Stormwater Management Program and Stormwater Retrofit Strategy.
4. Support implementation of the recommended integrated regeneration projects and other noted regeneration needs, by incorporating regeneration initiatives into City infrastructure projects wherever possible.
5. Participate with and support TRCA and the Region of Peel in the completion and evaluation of the County Court Sustainable Neighbourhood Retrofit Action Plan (SNAP), as a demonstration of an integrated regeneration project approach.
6. Participate with TRCA and others in further project scoping and implementation of integrated regeneration projects, including those identified in the areas of: Spring Creek subwatershed, Upper Mimico Creek East Branch, and Pearson Eco-Business Zone (such as through future SNAPs, Partners in Project Green: A Pearson Eco-Business Zone).

City of Mississauga

1. Identify ways to incorporate the new policy directions in Official Plan updates, if mechanisms do not already exist.

Etobicoke and Mimico Creeks Watersheds Technical Update Report

2. Participate in the development and implementation of a Regional Stormwater Management Strategy in cooperation with the Region of Peel, TRCA, CVC and the other area municipalities, and continue to advance the implementation of the City's Stormwater Management Program and Stormwater Retrofit Strategy.
3. Support implementation of the recommended integrated regeneration projects and other noted regeneration needs, by incorporating regeneration initiatives into City infrastructure projects wherever possible.
4. Participate with TRCA and others in further project scoping and implementation of integrated regeneration projects, including those identified in the Little Etobicoke Creek subwatershed and Pearson Eco-Business Zone, and the habitat-focused regeneration project identified for the Lower Etobicoke Creek (such as through future SNAPs, Partners in Project Green: A Pearson Eco-Business Zone).

City of Toronto

1. Identify ways to incorporate the new policy directions in Official Plan updates, if mechanisms do not already exist.
2. Continue to support TRCA in the Regional Watershed Monitoring Network and implementation of the recommended monitoring enhancements.
3. Support implementation of the recommended integrated regeneration projects and other noted regeneration needs, by incorporating regeneration initiatives into City infrastructure projects wherever possible and, in particular, continuing to commit to a program of stormwater management retrofit implementation set out in the Wet Weather Flow Management Master Plan.
4. Participate with TRCA and others in further project scoping and implementation of the integrated regeneration project for the Pearson Eco-Business Zone, and the habitat-focused regeneration project identified for the Lower Etobicoke Creek.

Toronto and Region Conservation Authority

1. Adopt the Technical Update and use the information to guide ongoing policies, programs, workplans and budgets.
2. Continue to deliver the Regional Watershed Monitoring Network and seek ways to support implementation of the recommended monitoring enhancements.
3. Collaborate with the Region of Peel and the City of Brampton and lead aspects of the further investigation of rebounding groundwater levels in the vicinity of the Brampton Esker and development of a management strategy, as necessary.
4. Support implementation of the regeneration needs, by incorporating initiatives into TRCA property management at Heart Lake Conservation Area.

Etobicoke and Mimico Creeks Watersheds Technical Update Report

5. Continue to lead implementation of Partners in Project Green: A Pearson Eco-business Zone and the County Court Sustainable Neighbourhood Retrofit Action Plan (SNAP) in partnership with local stakeholders, as demonstrations of integrated regeneration project approaches.
6. Support implementation of the recommended integrated regeneration projects, habitat-focused projects and other noted regeneration needs by participating with others and leading further project scoping and implementation (through such models as future SNAPs, Partners in Project Green: A Pearson Eco-Business Zone).

Etobicoke and Mimico Watersheds Coalition

1. Use the new information in the Technical Update to inform and guide ongoing implementation activities, where opportunities arise.
2. Assist TRCA in communicating and disseminating the findings and recommendations from the Technical Update.

The programs, policies and projects informed by this update will contribute to the achievement of our watershed vision and the goals and objectives of sustainability strategies, climate change mitigation and adaptation plans, the Toronto and Region Remedial Action Plan and to the management of the Lake Ontario nearshore.